



*CURRICULUM VITAE*

**MICHAEL LEO BRINES**

Born: November 13, 1951 at Midland, Michigan

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**Education and Training**

1986-88 Postdoctoral Fellow, Training Program in Clinical Investigation  
1986-89 Postdoctoral Fellow, Training Program in Endocrinology  
Department of Internal Medicine, Yale University  
1984-86 Intern and Resident, Department of Internal Medicine  
Yale-New Haven Hospital  
1983 M. D., Yale University, New Haven, Connecticut  
1978 Ph. D., neuroscience, The Rockefeller University, New York, New York  
1973 B. S., physics and biology, University of Notre Dame, Notre Dame, Indiana (with highest honors)

**Professional Experience**

1998- Senior Member, The Kenneth S. Warren Institute  
Tarrytown, New York  
1998- Associate, Cerami Consulting Corporation  
Tarrytown, New York  
1998- Associate Professor (Adjunct)  
1994-98 Associate Professor  
1989-94 Assistant Professor  
Section of Endocrinology, Department of Internal Medicine  
Yale University School of Medicine  
1992-98 Co-Director, Molecular Core  
Yale Diabetes and Endocrinology Research Center  
1989-98 Co-Director, Yale Pituitary Center  
1982-84 Adjunct Faculty  
1979-82 Assistant Professor  
1978-79 Research Associate (Laboratory of Neal E. Miller)  
1973-78 Graduate Fellow (Laboratory of Donald R. Griffin)  
The Rockefeller University, New York  
1975-76 Research Associate  
City University of New York  
1970-73 Research Assistant and Teaching Assistant  
Departments of Biology and Physics, University of Notre Dame

**Licensure and Board Certification**

1989 Endocrinology and Metabolism  
1988 American Board of Internal Medicine  
1985 State of Connecticut

**Professional Associations**

1993	The Pituitary Society
1991	The Endocrine Society
1976	American Optical Society
1976	Society for Neuroscience
1973	Sigma Xi

**Honors and Awards**

1991	Andrew Mellon Fellowship Award (Yale University)
1989	Epilepsy Foundation Fellowship
1976	The Albert Cass Traveling Fellowship (Princeton University)
1973	Phi Beta Kappa

## Bibliography

1. Brines, M.L., *Skylight polarization patterns as cues for honey bee orientation: physical measurements and behavioral experiments*. 1978, The Rockefeller University: New York. p. 378.
2. Brines, M.L. and J. Gould, *Bees have rules*. Science, 1979. 206: p. 571-573.
3. Dworkin, B., N. Miller, and M.L. Brines. *Visceral learning and homeostasis*. in *Joint Automatic Control Conference*. 1979.
4. Brines, M.L., *Dynamic patterns of skylight polarization as clock and compass*. J Theor Biol, 1980. 86(3): p. 507-512.
5. Gould, J., J. Kirschvink, K. Deffeyes, and M.L. Brines, *Magnetic field sensitivity: bees do not employ a permanent magnet detector*. J. Exp. Biol., 1980. 86: p. 1-8.
6. Brines, M.L. and J. Gould, *Skylight polarization patterns and animal orientation*. J. Exp. Biol., 1982. 96: p. 69-91.
7. Dworkin, B., N.E. Miller, S. Dworkin, N. Birbaumer, M.L. Brines, S. Jonas, E.P. Schwentker, and J.J. Graham, *Behavioral method for the treatment of idiopathic scoliosis*. Proc Natl Acad Sci U S A, 1985. 82(8): p. 2493-2497.
8. Orloff, J.J., T.L. Wu, H.W. Heath, T.G. Brady, M.L. Brines, and A.F. Stewart, *Characterization of canine renal receptors for the parathyroid hormone- like protein associated with humoral hypercalcemia of malignancy*. J Biol Chem, 1989. 264(11): p. 6097-6103.
9. Thiede, M.A., A.G. Daifotis, E.C. Weir, M.L. Brines, W.J. Burtis, K. Ikeda, B.E. Dreyer, R.E. Garfield, and A.E. Broadus, *Intrauterine occupancy controls expression of the parathyroid hormone- related peptide gene in preterm rat myometrium*. Proc Natl Acad Sci U S A, 1990. 87(18): p. 6969-6973.
10. Weir, E.C., M.L. Brines, K. Ikeda, W.J. Burtis, A.E. Broadus, and R.J. Robbins, *Parathyroid hormone-related peptide gene is expressed in the mammalian central nervous system*. Proc Natl Acad Sci U S A, 1990. 87(1): p. 108-112.
11. Isales, C.M., P.Q. Barrett, M. Brines, W. Bollag, and H. Rasmussen, *Parathyroid hormone modulates angiotensin II-induced aldosterone secretion from the adrenal glomerulosa cell*. Endocrinology, 1991. 129(1): p. 489-495.
12. Brines, M.L., B.I. Gulanski, M. Gilmore-Hebert, A.L. Greene, E.J. Benz, Jr., and R.J. Robbins, *Cytoarchitectural relationships between [3H]ouabain binding and mRNA for isoforms of the sodium pump catalytic subunit in rat brain*. Brain Res Mol Brain Res, 1991. 10(2): p. 139-150.

13. Robbins, R.J., **M.L. Brines**, J.H. Kim, T. Adrian, N. de Lanerolle, S. Welsh, and D.D. Spencer, *A selective loss of somatostatin in the hippocampus of patients with temporal lobe epilepsy*. Ann Neurol, 1991. **29**(3): p. 325-332.
14. **Brines, M.L.** and R.J. Robbins, *Inhibition of alpha 2/alpha 3 sodium pump isoforms potentiates glutamate neurotoxicity*. Brain Res, 1992. **591**(1): p. 94-102.
15. Kolansky, D.M., **M.L. Brines**, M. Gilmore-Hebert, and E.J. Benz, Jr., *The A2 isoform of rat Na<sup>+</sup>,K<sup>+</sup>-adenosine triphosphatase is active and exhibits high ouabain affinity when expressed in transfected fibroblasts*. FEBS Lett, 1992. **303**(2-3): p. 147-153.
16. Schmauss, C., **M.L. Brines**, and M.R. Lerner, *The gene encoding the small nuclear ribonucleoprotein-associated protein N is expressed at high levels in neurons*. J Biol Chem, 1992. **267**(12): p. 8521-8529.
17. de Lanerolle, N.C., **M.L. Brines**, J.H. Kim, A. Williamson, M.F. Philips, and D.D. Spencer, *Neurochemical remodelling of the hippocampus in human temporal lobe epilepsy*. Epilepsy Res Suppl, 1992. **9**: p. 205-219.
18. de Lanerolle, N.C., **M. Brines**, A. Williamson, J.H. Kim, and D.D. Spencer, *Neurotransmitters and their receptors in human temporal lobe epilepsy*. Epilepsy Res Suppl, 1992. **7**: p. 235-250.
19. Zahler, R., **M. Brines**, M. Kashgarian, E.J. Benz, Jr., and M. Gilmore-Hebert, *The cardiac conduction system in the rat expresses the alpha 2 and alpha 3 isoforms of the Na<sup>+</sup>,K<sup>+</sup>-ATPase*. Proc Natl Acad Sci U S A, 1992. **89**(1): p. 99-103.
20. **Brines, M.L.** and R.J. Robbins, *Cell-type specific expression of Na<sup>+</sup>, K<sup>+</sup>-ATPase catalytic subunits in cultured neurons and glia: evidence for polarized distribution in neurons*. Brain Res, 1993. **631**(1): p. 1-11.
21. **Brines, M.L.** and R.J. Robbins, *Glutamate up-regulates alpha 1 and alpha 2 subunits of the sodium pump in astrocytes of mixed telencephalic cultures but not in pure astrocyte cultures*. Brain Res, 1993. **631**(1): p. 12-21.
22. de Lanerolle, N.C., **M.L. Brines**, J.H. Kim, A. Williamson, M.F. Philips, and D.D. Spencer, *Neurochemical remodelling of the hippocampus in human temporal lobe epilepsy*, in *Molecular Neurobiology of Epilepsy*, G. Avanzini and e. al., Editors. 1993. p. 205-220.
23. de Lanerolle, N.C., **M.L. Brines**, A. Williamson, J.H. Kim, and D.D. Spencer, *Neurotransmitters and their receptors in human temporal lobe epilepsy*, in *The Dentate Gyrus and its role in Seizures*, C.E. Ribak, C. Gall, and I. Mody, Editors. 1993, Elsevier: New York. p. 235-250.
24. Bohler, H.C., Jr., E.E. Jones, and **M.L. Brines**, *Marginally elevated prolactin levels require magnetic resonance imaging and evaluation for acromegaly*. Fertil Steril, 1994. **61**(6): p. 1168-1170.

25. Borg, W.P., M.J. During, R.S. Sherwin, M.A. Borg, **M.L. Brines**, and G.I. Shulman, *Ventromedial hypothalamic lesions in rats suppress counterregulatory responses to hypoglycemia*. J Clin Invest, 1994. **93**(4): p. 1677-1682.
26. Korn, E.A., G. Gaich, **M. Brines**, and T.O. Carpenter, *Thyrotropin-secreting adenoma in an adolescent girl without increased serum thyrotropin-alpha*. Horm Res, 1994. **42**(3): p. 120-123.
27. de Lanerolle, N.C., J. Kim, and **M.L. Brines**, *Cellular and Molecular Alterations in Partial Epilepsy*. Clin. Neurosci., 1994. **2**: p. 64-81.
28. de Lanerolle, N.C., S.N. Magge, M.F. Philips, P. Trombley, D.D. Spencer, and **M.L. Brines**, *Adaptive changes of epileptic human temporal lobe tissue: properties of neurons and glia*, in *Seizures and Syndromes in Epilepsy*, P. Wolf, Editor. 1994, J. Libby and Company Ltd.: London. p. 431-448.
29. de Lanerolle, N.C., M. Gunel, S. Sundaresan, M.Y. Shen, **M.L. Brines**, and D.D. Spencer, *Vasoactive intestinal polypeptide and its receptor changes in human temporal lobe epilepsy*. Brain Res, 1995. **686**(2): p. 182-193.
30. **Brines, M.L.**, A.O. Dare, and N.C. de Lanerolle, *The cardiac glycoside ouabain potentiates excitotoxic injury of adult neurons in rat hippocampus*. Neurosci Lett, 1995. **191**(3): p. 145-148.
31. **Brines, M.L.**, H. Tabuteau, S. Sundaresan, J. Kim, D.D. Spencer, and N. de Lanerolle, *Regional distributions of hippocampal Na<sup>+</sup>,K<sup>+</sup>)-ATPase, cytochrome oxidase, and total protein in temporal lobe epilepsy*. Epilepsia, 1995. **36**(4): p. 371-383.
32. **Brines, M.L.**, *Pituitary Apoplexy*, in *Neurobase*, S. Gilman, G.W. Goldstein, and S.G. Waxman, Editors. 1995, Arbor Publishing: La Jolla, CA.
33. **Brines, M.L.**, *Hypopituitarism*, in *Neurobase*, S. Gilman, G.W. Goldstein, and S.G. Waxman, Editors. 1995, Arbor Publishing: La Jolla, CA.
34. Holt, E.H., A.E. Broadus, and **M.L. Brines**, *Parathyroid hormone-related peptide is produced by cultured cerebellar granule cells in response to L-type voltage-sensitive Ca<sup>2+</sup> channel flux via a Ca<sup>2+</sup>/calmodulin-dependent kinase pathway*. J Biol Chem, 1996. **271**(45): p. 28105-28111.
35. Wallace, E.A., **M.L. Brines**, B.K. Kinder, and A.C. de Lotbiniere, *Clinical case seminar: Cushing's syndrome in an elderly woman with large thyroid and pituitary masses*. J Clin Endocrinol Metab, 1996. **81**(2): p. 453-456.
36. Zahler, R., W. Sun, T. Ardito, **M.L. Brines**, and M. Kashgarian, *Cellular and Developmental Aspects of Na,K-ATPase Isoform Expression in Rat Cardiovascular Tissue*. Amer. J. Physiol., 1996. **273**: p. C361-371.

37. **Brines, M.L.**, S. Sundaresan, D.D. Spencer, and N.C. de Lanerolle, *Quantitative autoradiographic analysis of ionotropic glutamate receptor subtypes in human temporal lobe epilepsy: up-regulation in reorganized epileptogenic hippocampus*. Eur J Neurosci, 1997. 9(10): p. 2035-2044.
38. de Lanerolle, N.C., A. Williamson, C. Meredith, J.H. Kim, H. Tabuteau, D.D. Spencer, and **M.L. Brines**, *Dynorphin and the kappa 1 ligand [3H]U69,593 binding in the human epileptogenic hippocampus*. Epilepsy Res, 1997. 28(3): p. 189-205.
39. **Brines, M.L.**, *Diabetes Insipidus*, in *Neurobase*, S. Gilman, G.W. Goldstein, and S.G. Waxman, Editors. 1997, Arbor Publishing: La Jolla, CA.
40. Inzucchi, S.E. and **M.L. Brines**, *Pheochromocytoma*, in *Neurobase*, S. Gilman, G.W. Goldstein, and S.G. Waxman, Editors. 1997, Arbor Publishing: La Jolla, CA.
41. **Brines, M.L.**, *Sheehan's Syndrome*, in *Neurobase*, S. Gilman, G.W. Goldstein, and S.G. Waxman, Editors. 1997, Arbor Publishing: La Jolla, CA.
42. Inzucchi, S.E. and **M.L. Brines**, *Syndrome of Inappropriate Antidiuresis*, in *Neurobase*, S. Gilman, G.W. Goldstein, and S.G. Waxman, Editors. 1997, Arbor Publishing: La Jolla, CA.
43. Xie, H., **M.L. Brines**, and N.C. de Lanerolle, *Transcripts of the transposon mariner are present in epileptic brain*. Epilepsy Res, 1998. 32(1-2): p. 140-153.
44. de Lanerolle, N.C., T. Eid, G. von Campe, I. Kovacs, D.D. Spencer, and **M. Brines**, *Glutamate receptor subunits GluR1 and GluR2/3 distribution shows reorganization in the human epileptogenic hippocampus*. Eur J Neurosci, 1998. 10(5): p. 1687-1703.
45. Yavari, R., C. Adida, P. Bray-Ward, **M. Brines**, and T. Xu, *Human metalloprotease-disintegrin Kuzbanian regulates sympathoadrenal cell fate in development and neoplasia*. Hum Mol Genet, 1998. 7(7): p. 1161-1167.
46. Guoth, M.S., J. Kim, A.C. de Lotbiniere, and **M.L. Brines**, *Neurosarcoidosis presenting as hypopituitarism and a cystic pituitary mass*. Am J Med Sci, 1998. 315(3): p. 220-224.
47. **Brines, M.L.**, Z. Ling, and A.E. Broadus, *Parathyroid hormone-related protein protects against kainic acid excitotoxicity in rat cerebellar granule cells by regulating L-type channel calcium flux*. Neurosci Lett, 1999. 274(1): p. 13-16.
48. Borg, M.A., W.P. Borg, W.V. Tamborlane, **M.L. Brines**, G.I. Shulman, and R.S. Sherwin, *Chronic hypoglycemia and diabetes impair counterregulation induced by localized 2-deoxy-glucose perfusion of the ventromedial hypothalamus in rats*. Diabetes, 1999. 48(3): p. 584-587.
49. **Brines, M.L.** and A.E. Broadus, *Parathyroid hormone-related protein markedly potentiates depolarization-induced catecholamine release in PC12 cells via L-type voltage-sensitive Ca<sup>2+</sup> channels*. Endocrinology, 1999. 140(2): p. 646-651.

50. Asif, M., J. Egan, S. Vasani, G.N. Jyothirmayi, M.R. Masarekar, S. Lopez, C. Williams, R.L. Torres, D. Wagle, P. Ulrich, A. Cerami, **M. Brines**, and T.J. Regan, *An advanced glycation endproduct cross-link breaker can reverse age-related increases in myocardial stiffness [published erratum appears in Proc Natl Acad Sci U S A 2000 May 9;97(10):5679]*. Proc Natl Acad Sci U S A, 2000. 97(6): p. 2809-2813.
51. Chatterjee, O., I.A. Nakchbandi, W.E. Philbrick, B.E. Dreyer, J.-P. Zhang, L. Kaczmarek, **M.L. Brines**, and A.E. Broadus, *Endogenous Parathyroid Hormone-related Protein Functions as a Neuroprotective Agent*. Science, 2000. (In Review).
52. **Brines, M.L.**, P. Gehzzi, S. Keenan, D. Agnello, N.C. de Lanerolle, C. Cerami, L.M. Itri, and A. Cerami, *Erythropoietin crosses the blood brain barrier to protect against experimental brain injury*. Proc Natl Acad Sci U S A, 2000. 97: p. 10526-10531.
53. Vaitkevicius, PV, Lane M, Spurgeon H, Ingram DK, Roth GS, Egan JJ, Vasani S, Wagle DR, Ulrich P, **Brines M**, Wuerth J-P, Cerami A, Lakatta EG. (2001) A cross-link Breaker has sustained effects on arterial and ventricular properties in older rhesus monkeys. Proc Natl Acad Sci USA 98(3): 1171-1175.
54. Siren A-L, Fratelli M, **Brines M**, Goemans C, Casagrande S, Lewczuk P, Keenan S, Gleiter C, Pasquali C, Capobianco A, Mennini T, Heumann R, **Cerami A**, Ehrenreich H, Ghezzi P, Erythropoietin prevents neuronal apoptosis after cerebral ischemia and metabolic stress Proc. Natl Acad Sci USA vol. 98(7) 4044-4049
55. Cerami A, Brines M, Ghezzi P, Cerami C., *Effects of Epoetin Alfa on the Central Nervous System* - "Seminars in Oncology" Volume 28(2) Supplement H (April 2001) pp 65-69